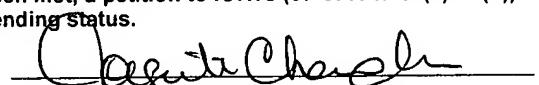


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| FORM PTO-1390 (Modified) U.S. PATENT AND TRADEMARK OFFICE; U.S. DEPARTMENT OF COMMERCE<br>(REV. 2-2005)   |  | ATTORNEY'S DOCKET NUMBER<br>3220-100522                             |
| TRANSMITTAL LETTER TO THE UNITED STATES<br>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371  |  | U.S. APPLICATION NO. (If known, see 37 CFR 1.5)<br><b>10/550439</b> |
| INTERNATIONAL APPLICATION NO.<br>PCT/US2004/009358  | INTERNATIONAL FILING DATE<br>26 March 2004 | PRIORITY DATE CLAIMED<br>27 March 2003                              |
| TITLE OF INVENTION<br><b>METALLIC NANOPARTICLES AS ORTHOPEDIC BIOMATERIAL</b>   |  |   |
| APPLICANT(S) FOR DO/EO/US<br>Thomas J. Webster and Jeremiah U. Ejiofor  |  |   |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:   |  |   |
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.</li> <li>4. <input type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2))             <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).</li> <li>11. <input type="checkbox"/> A copy of the International Preliminary Examination Report (PCT/IPEA/409).</li> <li>12. <input checked="" type="checkbox"/> A copy of the International Search Report (PCT/ISA/210).</li> </ol> <p><b>Items 13 to 23 below concern document(s) or information included:</b></p> <ol style="list-style-type: none"> <li>13. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>14. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>15. <input type="checkbox"/> A <b>FIRST</b> preliminary amendment.</li> <li>16. <input type="checkbox"/> A <b>SECOND</b> or <b>SUBSEQUENT</b> preliminary amendment.</li> <li>17. <input type="checkbox"/> A substitute specification.</li> <li>18. <input checked="" type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>19. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13/ter.2 and 37 CFR 1.821 - 1.825.</li> <li>20. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li>21. <input type="checkbox"/> A second copy of the English language translation of the International Application under 35 U.S.C. 154(d)(4).</li> <li>22. <input checked="" type="checkbox"/> Express Mail Label No. EV 705200060 US</li> <li>23. <input checked="" type="checkbox"/> Other items or information:<br/>                 Check no. 12672 for \$500.00<br/>                 Power of Attorney<br/>                 Fee sheet in duplicate             </li> </ol> |  |   |

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

|   |              |  |            |                          |                 |
|---|--------------|--|------------|--------------------------|-----------------|
| U.S. APPLICATION NO (if known, see 37 CFR 1.5)  |              | INTERNATIONAL APPLICATION NO.  |            | ATTORNEY'S DOCKET NUMBER |                 |
| <b>10/550439</b>  |              | <b>PCT/US2004/009358</b>   |            | <b>3220-100522</b>       |                 |
| The following fees are submitted:   |              |  |            | CALCULATIONS PTO USE     |                 |
| 24. <input checked="" type="checkbox"/> Basic national fee .....  |              |  |            | \$300                    | \$300.00        |
| 25. <input checked="" type="checkbox"/> Examination fee<br>If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4). ....   |              |  |            | \$100                    | \$100.00        |
| All other situations. ....  |              |  |            | \$200                    |                 |
| 26. <input checked="" type="checkbox"/> Search fee<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority .....   |              |  |            | \$100                    |                 |
| International Search Report prepared and provided to the Office .....   |              |  |            | \$400                    |                 |
| All other situations. ....  |              |  |            | \$500                    | \$100.00        |
| <b>TOTAL OF 24, 25 and 26 =</b>   |              |  |            | \$                       | <b>\$500.00</b> |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.  |              |  |            |                          |                 |
| Total Sheets  | Extra Sheets | Number of each additional 50 or fraction thereof (round up to a whole) |            | RATE                     |                 |
| 10 - 100 =  | 0 /50 =      | 0  |            | x \$250.00               | \$ 0.00         |
| Surcharge of \$130.00 for furnishing the oath or declaration later than months from the earliest claimed priority date (37 CFR 1.492(e)).   |              |  |            |                          |                 |
| CLAIMS  | NUMBER FILED | NUMBER EXTRA   | RATE       |                          |                 |
| Total claims  | 11 - 20 =    | 0  | x \$50.00  | \$ 0.00                  |                 |
| Independent claims  | 2 - 3 =      | 0  | x \$200.00 | \$ 0.00                  |                 |
| MULTIPLE DEPENDENT CLAIMS (if applicable) <input type="checkbox"/>  |              |  | + \$360.00 | \$                       | \$0.00          |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>  |              |  |            | \$                       | <b>\$500.00</b> |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.  |              |  |            |                          |                 |
| <b>SUBTOTAL =</b> \$ 500.00   |              |  |            |                          |                 |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).   |              |  |            |                          |                 |
| <b>TOTAL NATIONAL FEE =</b> \$ 500.00   |              |  |            |                          |                 |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40 per property + \$ 0.00   |              |  |            |                          |                 |
| <b>TOTAL FEES ENCLOSED =</b> \$ 500.00  |              |  |            |                          |                 |
| <input type="checkbox"/> Amount to be \$  |              |  |            |                          |                 |
| <input type="checkbox"/> Amount to be \$  |              |  |            |                          |                 |
| <p>a. <input checked="" type="checkbox"/> A check in the amount of \$ <u>500.00</u> to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees.<br/>A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>12-0913</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> |              |  |            |                          |                 |
| NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.  |              |  |            |                          |                 |
| SEND ALL CORRESPONDENCE TO:<br><br>Barnes & Thornburg, LLP<br>P.O. Box 2786<br>Chicago, IL 60690-2786   |              |  |            |                          |                 |
| <br><b>Jagriti R. Chander</b><br><b>NAME</b><br><b>46,610</b><br><b>REGISTRATION NUMBER</b>   |              |  |            |                          |                 |